



**US Army Corps
of Engineers**

DCAF Bulletin

Design Construction Analysis Feedback

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CEMP-E/CECW-E

Subject: Scheduling of Testing Adjusting and Balancing (TAB) and Commissioning of HVAC Systems

Applicability: Information

Reference: CEGS 15990 TAB of HVAC Systems
 CEGS 15995 Commissioning of HVAC Systems
 DCAF Bulletin 98-7 Commissioning of HVAC Systems
 Air Force ETL 90-10 Commissioning of HVAC Systems

1. The purpose of this DCAF Bulletin is to cover the time necessary to perform TAB and Commissioning of HVAC systems at the end of a contract. Many contractors are not scheduling sufficient time at the end of the contract for each phase of testing. TAB and Commissioning need to be emphasized to the contractor during the Preconstruction Conference and discussed in detail during the Coordination Meeting Conference. It should be addressed during review of the contractors Network Analysis System (NAS) or bar chart submission. The Area/Resident Engineer should carefully review the contractor's progress schedule to ensure sufficient time and resources are assigned to the TAB and Commissioning process. Appropriate progress payments must be retained and held until completion of this phase.

2. The specifications determine the sequence of TAB and Commissioning. TAB can be performed only after each system is complete, including installation and operations of controls, and all aspects of the facility that have any bearing on the HVAC systems, including installation of ceilings, walls, windows, doors, and partitions, are complete. All items such as duct work and piping ports, terminals connections, etc., necessary to perform TAB shall be complete during the Systems Readiness Check. Commissioning shall begin only after all work required in related

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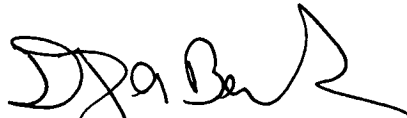
sections, including Section 15950 HVAC Controls Systems and Section 15990 TAB of HVAC Systems, has been successfully completed, and all test and inspection reports, TAB and verification reports and O & M Manuals have been submitted and approved. Reference figures 1 & 2 for a sample NAS schedule showing the interrelationship of TAB and Commissioning. The contractors approved schedule should reflect the sequence shown in figures 1 & 2.

3. This DCAF bulletin Point of Contact is Gary Bauer (CEMP-EC) at 202-761-0205.

Encl



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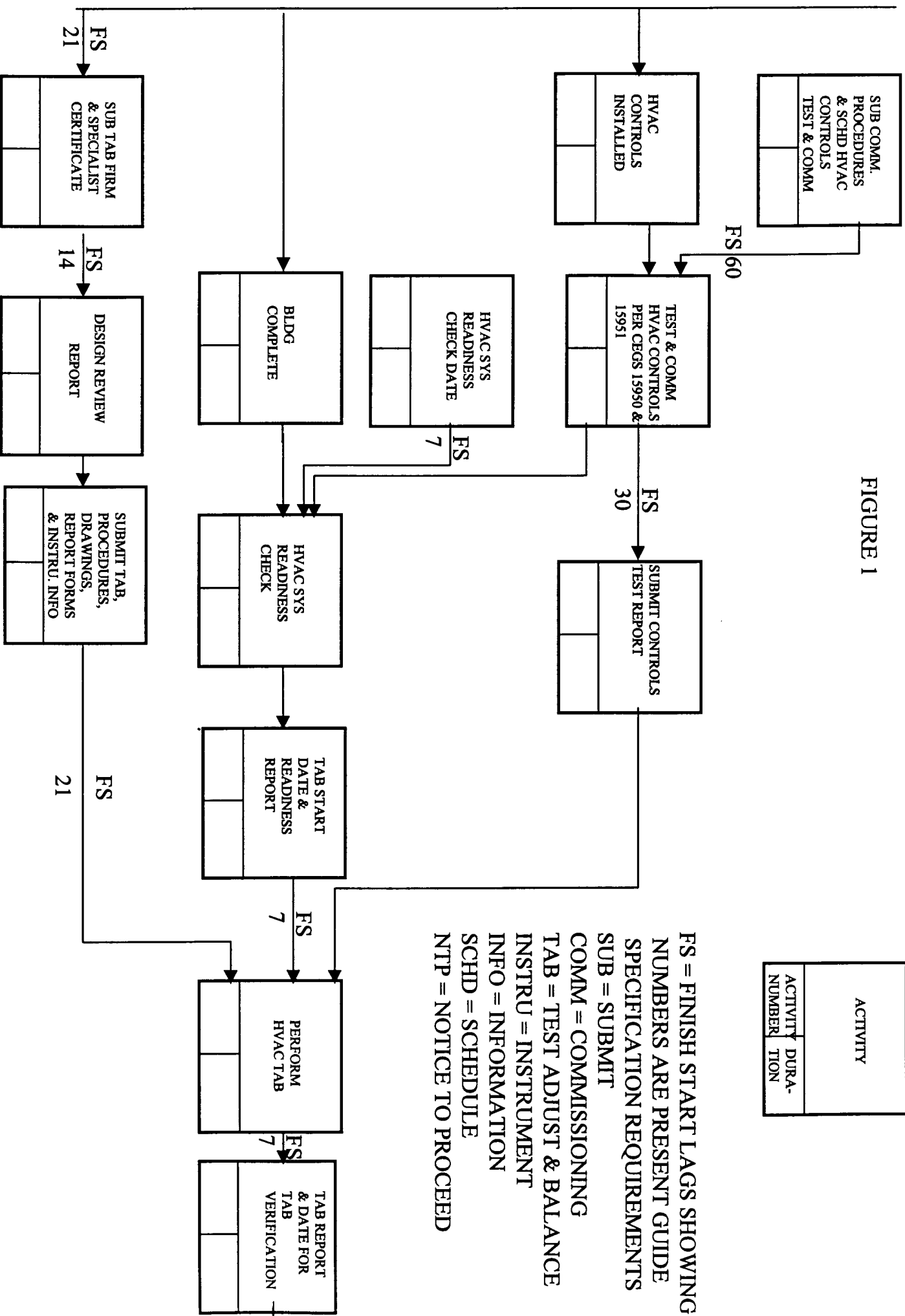
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SAMPLE

| ACTIVITY | |
|--------------------|---------------|
| ACTIVITY NUMBER | DURA- TION |

FIGURE 1

FS = FINISH START LAGS SHOWING
NUMBERS ARE PRESENT GUIDE
SPECIFICATION REQUIREMENTS
SUB = SUBMIT
COMM = COMMISSIONING
TAB = TEST ADJUST & BALANCE
INSTRU = INSTRUMENT
INFO = INFORMATION
SCHD = SCHEDULE
NTP = NOTICE TO PROCEED



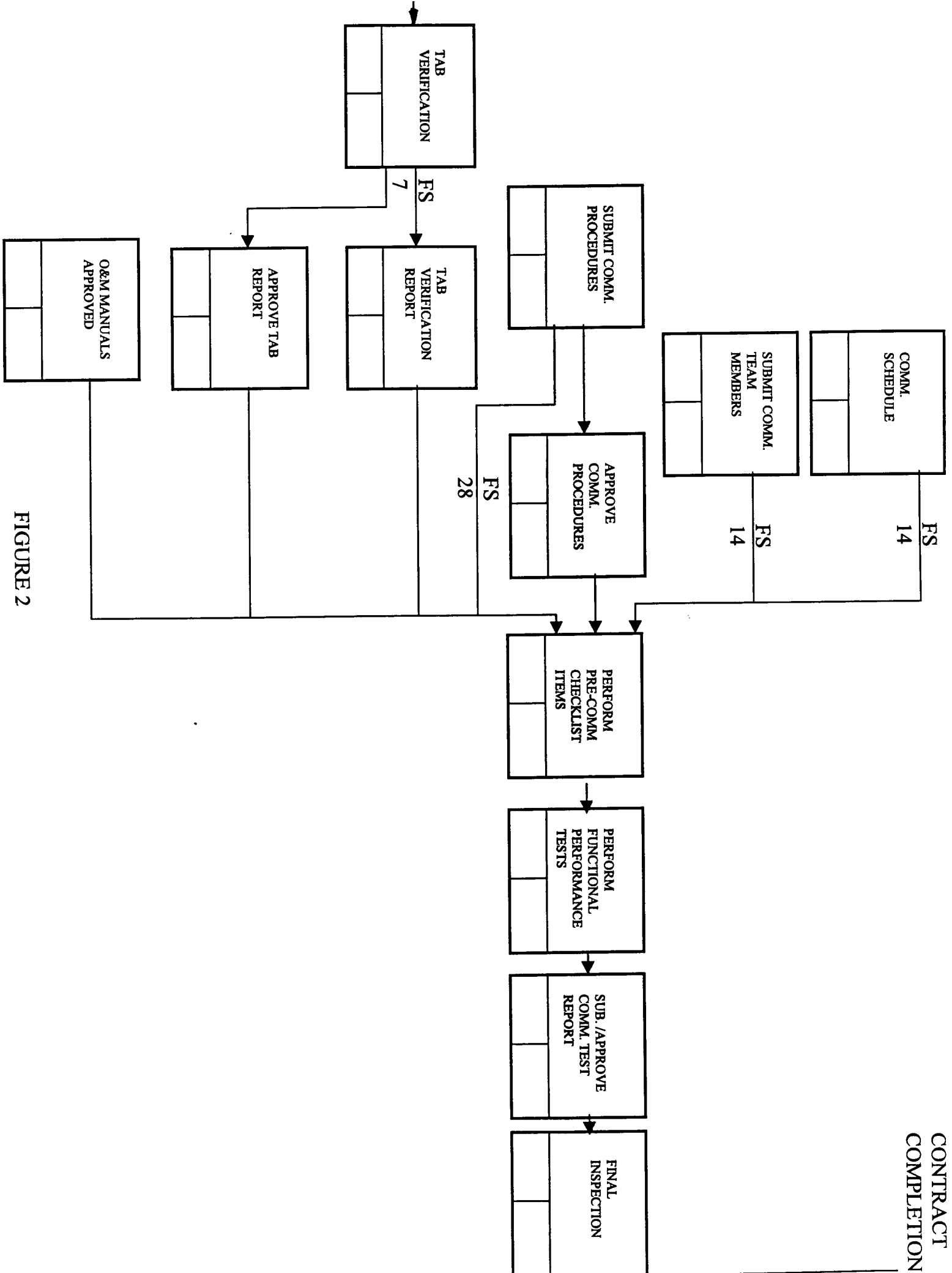


FIGURE 2